

Abstract

Apparatus and methods are provided for improving data exchanges between electronic devices, such as memory controllers and RLDRAMs. An I/O cell includes a signal pad for transferring a first signal to an electronic device coupled thereto and for receiving a second signal from the electronic device. In one aspect, a duty cycle controller is coupled to the signal pad for balancing a duty cycle of the first signal with respect to a clock signal. In another aspect, dynamic switchable termination is coupled to the signal pad for providing termination impedance when the I/O cell is receiving the second signal.